

# NEW AND NOTEWORTHY ANGIOSPERM RECORDS FOR IOWA

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Recent field work in Iowa has resulted in the discovery of three angiosperms previously unknown in the state and populations of nine other angiosperms that are rare. Eight of the 12 species are considered native in Iowa. Most populations were discovered during field surveys that are part of an effort to complete a comprehensive flora of Bremer County, located in northeast Iowa. One species excluded from the Iowa flora by recent workers should be reinstated based on a 1998 collection in the state and an older herbarium specimen at the R.L. McGregor Herbarium (KANU), University of Kansas.

## NEW STATE RECORDS

***Eleocharis intermedia*** (Muhl.) Schult. (Cyperaceae).—A number of authors have included Iowa within the range of this caespitose spike-rush (Rydberg 1932; Svenson 1957; Mohlenbrock 1976; Gleason & Cronquist 1991); however, it was not listed for the state by Eilers and Roosa (1994). A small population discovered along the Cedar River in 1997 supports its inclusion in the state's flora.

Voucher specimen: IOWA. Bremer Co.: T92N, R14W, sec 22, SW 1/4, SW 1/4 & sec 21, SE 1/4, SE 1/4, Waverly, 0.5 mi W, 1.5 mi N, Cedar Bend Conservation Park, E end, drying mud flats along the Cedar River, 7 Oct 1997, *Freeman 10198* (ISC, KANU).

***Rumex stenophyllus*** Ledeb. (Polygonaceae).—Eilers and Roosa (1994) excluded this introduced species from their checklist, stating that reports of the taxon in Iowa were unsubstantiated. It was mapped in Harrison County, Iowa, in the *Atlas of the Flora of the Great Plains* (Great Plains Flora Association 1977) based on a voucher at KANU, and it recently was collected at a second locality in the state.

Voucher specimens: IOWA. Bremer Co.: T91N, R14W, sec 2, SE 1/4 NW 1/4, Waverly, E side of town, open, disturbed railroad right-of-way just S of Bremer Avenue, 18 Jul 1998, *Freeman 11090* (ISC, KANU). Harrison Co.: 3 mi SE of Modale, margin of farm pond, exposed, weedy, wet, 17 Aug 1974, *Brooks 8173, McGregor & Stephens* (KANU).

*Spergularia marina* (L.) Griseb. (Caryophyllaceae).—This diminutive, introduced, annual weed occurs sporadically in central North America and more commonly along the coasts (Rossbach 1940). A small population was discovered in 1991 in a disturbed, grassy site at the edge of a sidewalk in a rest area along Interstate 35. More plants were discovered in a grassy median in the parking lot of the same rest area in 1995. Annual visits reveal this population is persisting.

Voucher specimens: IOWA. Clarke Co.: roadside rest area along I-35, ca 2 mi W & 2 mi S of Osceola, W side of interstate, 2 Sep 1991, *Freeman & Freeman 4124* (KANU); 5 Sep 1995, *Freeman & Freeman 7766* (ISC, KANU).

#### NOTEWORTHY RECORDS

*Astragalus distortus* Torr. & A. Gray var. *distortus* (Fabaceae).—Bent milk-vetch is documented in 11 southeastern and eastern Iowa counties; however, extant populations occur in only six of these (Roosa et al. 1989). The species typically is associated with sand prairies (Eilers & Roosa 1994) and is a special concern plant (Iowa Administrative Code 571 1994). A small, degraded, sandy prairie remnant in a cemetery north of Janesville supports roughly two-dozen plants of this species. Despite the small size of this population, many individuals produced fruits in the spring of 1998. This is the first report of the species from the county.

Voucher specimen: IOWA. Bremer Co.: T91N, R14W, sec 35, NE 1/4, NE 1/4, NE 1/4, Janesville, 0.5 mi N, Oakville Cemetery, mowed, sandy, upland cemetery E of the Cedar River, 24 May 1998, *Freeman 10757* (ISC, KANU).

*Besseyia bullii* (Eaton) Rydb. (Scrophulariaceae).—Eastern kittentail is a Midwest endemic found on dry prairie ridges, in woodlands, and along sandy river terraces (Roosa et al. 1989). It has been documented in more than a dozen eastern and north-central Iowa counties, including Bremer County. It is a threatened species in the state (Iowa Administrative Code 571 1994). A new population of fewer than 20 individuals was discovered in Bremer County in 1997, and because the population is small, a voucher specimen was not collected. Instead, a photograph was taken and serves as the voucher for this population.

Voucher specimen: IOWA. Bremer Co.: T91N, R14W, sec 21, W 1/2, Janesville, 2 mi N, 2.5 mi W, Shell Rock Greenway, Shell Rock Access, mesic floodplain forest along a tributary to the Shell Rock River and small area of remnant tallgrass prairie along an old road right-of-way, 3 Jun 1997, *Freeman s.n.* [photographic vouchers] (KANU).

*Carex conoidea* Schkuhr ex Willd. (Cyperaceae).—Field sedge is a special concern plant in Iowa (Iowa Administrative Code 571 1994). It is documented from Black Hawk, Bremer, Fayette, Linn, and Scott counties in eastern Iowa (Mark Leoschke, pers. comm.; Roosa et al. 1989). A second Bremer County population recently was discovered in a mesic prairie growing with *C. bicknellii* Britton, *C. cristatella* Britton, *C. sartwellii* Dewey, and *C. stricta* Lam.

Voucher specimen: IOWA. Bremer Co.: T92N, R13W, sec 29, NE 1/4, NE 1/4, NE 1/4, Bremer, 1.1 mi S, elev 1000 ft, small, mesic, upland, tallgrass prairie remnant along intermittent stream on W side of blacktop, soil rich and loamy, infrequent, 19 Jun 1998, *Freeman 11055* (ISC, KANU).

*Carex siccata* Willd. (Cyperaceae).—The only previous record of this sedge in Iowa is a 1936 collection from Clay County (Gilly 1946; Roosa et al. 1989), where it was reported as *C. foenea* Willd. However, the name *Carex foenea* has been misapplied in much of the literature (Cronquist et al. 1977; Gleason & Cronquist 1991). While I have not seen the voucher cited by Gilly (1946), his key and description match *C. siccata* rather than *C. foenea*. True *C. foenea* is a member of section *Ovales* and occurs north of Iowa. *Carex siccata*, a member of section *Arenariae*, is widely distributed in the northern U.S. and southern Canada (Cronquist et al. 1977). It is listed (as *C. foenea*) as presumed extirpated by Roosa et al. (1989) and is a special concern plant (Iowa Administrative Code 571 1994). A small population was discovered in a sand prairie remnant along the Wapsipinicon River, where *Stipa spartea* Trin. is the dominant species. Common species at the site are *Dichanthelium depauperatum* (Muhl.) Gould, *Euphorbia corollata* L., *Plantago patagonica* Jacq. var. *patagonica*, *Poa pratensis* L., *Lespedeza capitata* Michx., *Rumex acetosella* L., and *Vulpia octoflora* (Walter) Rydb.

Voucher specimens: IOWA. Bremer Co.: T92N, R12W, sec 2, E 1/2, Tripoli, 1.5 mi E, Sweet Marsh Wildlife Management Area, S end, small, sandy prairie remnant on the E side of the Wapsipinicon River, 4 Jun 1997, *Freeman 9018* (KANU); 16 Jun 1997, *Freeman 9234* (KANU, ISC).

*Floerkea proserpinacoides* Willd. (Limnanthaceae).—This weak, forest annual is reported only from Dubuque County (Eilers & Roosa 1994). It is a species of special concern (Iowa Administrative Code 571 1994). A large colony was discovered in a narrow, forested, creek floodplain southeast of Waverly.

Voucher specimen: IOWA. Bremer Co.: T91N, R13W, sec 16, NW 1/4, SW 1/4, Waverly, 3 mi E, 1.5 mi S, rich, mesic, upland, maple-basswood forest and oak-hickory forest on slopes along Baskins Creek and its tributaries, large colony along floodplain of creek, 24 May 1997, *Freeman 8947* (ISC, KANU).

*Geum vernum* (Raf.) Torr. & A. Gray (Rosaceae).—Spring avens is reported from five Iowa counties, mostly in the southern third of the state (Eilers & Roosa 1994). It is a species of special concern (Iowa Administrative Code 571 1994). Scattered plants were discovered in northeast Bremer County in 1997, the first record for the county.

Voucher specimen: IOWA. Bremer Co.: T93N, R11W, sec 13, N 1/2, NE 1/4, Sumner, 1 mi N, 0.5 mi E, North Woods County Park, mesic, maple-basswood-hickory forest E of the Little Wapsipinicon River and clearings in the forest, infrequent, 4 Jun 1997, *Freeman 9049* (ISC, KANU).

*Platanthera flava* (L.) Lindl. var. *herbiola* (R. Br.) Luer (Orchidaceae).—This orchid has been reported in low, mesic prairies and sedge meadows in

eight counties scattered in the eastern third of the state (Roosa et al. 1989), including Bremer County. It is endangered in Iowa (Iowa Administrative Code 571 1994). Two populations were discovered in the Wapsipinicon River drainage in Bremer County. One population of less than a dozen individuals (*Freeman 9685*) was found in a formerly pastured, sedge meadow. This appears to be the first record of the species at this site. The second population (*Freeman 11020*) is much larger, comprising more than 100 individuals scattered in a 2-acre area of mesic tallgrass prairie on the north end of the Sweet Marsh Wildlife Management Area. This population first was discovered in 1993 by Mark Leoschke of the Iowa Department of Natural Resources (John Pearson, pers. comm.).

Voucher specimens: IOWA. Bremer Co.: T92N, R11W, sec 20, NW 1/4 & sec 19, NE 1/4, Tripoli, 2.5 mi S, 4 mi E, Wapsi Greenbelt, Buhr Access, open sedge meadow S of Bremer Co. C33 and E of the Wapsipinicon River, 7 Aug 1997, *Freeman 9685* (KANU); T92N, R12W, sec 27, SE 1/4, SE 1/4, SE 1/4, Tripoli, 1 mi N, 1 mi E, Sweet Marsh Wildlife Management Area, N side, mesic to wet-mesic prairie W of the East Fork Wapsipinicon River, 18 Jun 1998, *Freeman 11020* (ISC, KANU).

**Platanthera psychodes** (L.) Lindl. (Orchidaceae).—Purple fringed orchid has been documented in 10 counties in northeast and east-central Iowa where it typically grow in mesic prairies, sedge meadows, and fens (Roosa et al. 1989). Nekola (1990) reported populations from two sites in Bremer County. Recently, one additional site for this threatened species (Iowa Administrative Code 571 1994) was discovered in the same county. A photographic voucher was taken due to the small size of this population.

Voucher specimen: IOWA. Bremer Co.: T92N, R11W, sec 20, NW 1/4 & sec 19, NE 1/4, Tripoli, 2.5 mi S, 4 mi E, Wapsi Greenbelt, Buhr Access, open sedge meadow S of Bremer Co. C33 and E of the Wapsipinicon River, 7 Aug 1997, *Freeman 8033-8036* [photographic vouchers] (KANU).

**Potentilla intermedia** L. (Rosaceae).—This European native previously was reported only from Black Hawk County, Iowa (Eilers & Roosa 1994). A small population was discovered in 1997 in adjacent Bremer County.

Voucher specimen: IOWA. Bremer Co.: T91N, R14W, sec 2, N 1/2, SE 1/4, Waverly, SE side of town along the Cedar River in Brookwood Park, mesic floodplain forest and clearing along the river, infrequent along gravelly trail, 16 Jun 1997, *Freeman 9205* (ISC, KANU).

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